

ABSTRACT OF THE DISCLOSURE

A seal and bearing assembly for use in rotating machinery of the type having a rotor which turns within a stationary housing. The rotor and housing define a seal cavity therein in which the seal and bearing assembly is positioned. The assembly comprises a first bearing race adapted for engagement with a rotating surface on the rotor or a stationary surface, a second race adapted for engagement with the other of the rotating or stationary surfaces, and a plurality of bearing elements disposed between the first and second races. A bearing cage may be used which defines a plurality of bearing openings therein disposed between the first and second races, wherein the bearing elements are disposed in the bearing openings. Preferably, the bearing elements are rollers. In one embodiment, the seal and bearing assembly also comprises a ring that substantially seals along the stationary surface in the housing, wherein the ring defines a race engagement surface thereon, the first bearing engages the rotating surface, and the second race engages the race engagement surface. In a preferred embodiment, the assembly has first races on opposite sides of the ring with corresponding second races and bearing elements and/or cages. The bearing components are sized such that any fluid flow or leakage therethrough is minimal.